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Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	68	L-ascorbic acid and (L-gulose or L-galactose or L-idose or L-talose or L-gulono-1,4-lactone or L-gulonic acid or L-galactono-1,4-lactone or L-galctonic acid or L-idono-1,4-lactone, L-iodonic "acid. L-talono-1,4-lactone" or L-talonic acid)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2006/07/28 08:21
L2	12	L1 and SEQ ID NO: "2"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2006/07/28 08:24
L3	2	"6730503".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	ADJ	ON	2006/07/28 08:25



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1. [Biotechnological approaches for L-ascorbic acid production](#)

**Hancock, R.D. / Viola, R.**, *Trends in Biotechnology*, Jul 2002

...Biotechnological approaches for **L-ascorbic acid production** Robert D. Hancock Roberto Viola...majority of world vitamin C (**L-ascorbic acid**, L-AA) is produced. The...The Reichstein process for **L-ascorbic acid** (L-AA) manufacture...

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2. [Biotechnological approaches for L-ascorbic acid production](#)

**Robert D Hancock / Roberto Viola**, *Trends Biotechnol*, Jul 2002

...develop alternatives to the Reichstein process, a largely chemical synthesis by which the vast majority of world vitamin C (**L-ascorbic acid**, L-AA) is produced. The pressures include increasing environmental concerns and legislation, and the need to increase...

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3. [The use of micro-organisms for L-ascorbic acid production: current status and future perspectives](#)

**R D Hancock / R Viola**, *Appl Microbiol Biotechnol*, Sep 2001

**L-Ascorbic acid** (L-AA) has been industrially produced for around 60 years in a primarily chemical process utilising D-glucose (D-glc) as starting...

**MEDLINE/PubMed Citation on** 

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4. [L-ASCORBIC ACID PRODUCTION IN MICROORGANISMS](#)

**HUSS, Ronald, John / RUNNING, Jeffrey, A. / SKATRUD, Thomas, J. / DCV, Inc.,**  
*EUROPEAN PATENT*, Feb 1997

...improvement in microalgal **L-ascorbic acid production**. However, at the relatively...required for cell metabolism and **L-ascorbic acid production**. A need exists

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for an efficient...microalgal method for producing **L-ascorbic** acid at low pH (less than...  
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- 5. Manufacture of L-ascorbic acid and D-erythorbic acid**  
**Asakura, Akira / Hoshino, Tatsuo / Kiyasu, Tatsuya / Shinjoh, Masako / DSM IP Assets B.V., EUROPEAN PATENT**, Aug 2000

...other methods of synthesizing **L-ascorbic** acid by microorganisms. Most microbial productions of **L-ascorbic** acid have been focused on the production of an intermediate of **L-ascorbic acid production**, 2-keto-L-gulonic acid, from...

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- 6. CONTINUOUS PROCESS FOR PRODUCING L-ASCORBIC ACID**

**ARUMUGAM, Bhaskar / COLLINS, Nick / MACIAS, Transtio / PERRI, Steven / POWELL, Jeffery / SINK, Chester / CUSHMAN, Michael / EASTMAN CHEMICAL COMPANY, PATENT COOPERATION TREATY APPLICATION**, Jul 2002

...reactor exemplifying the change in **L- ascorbic** acid selectivity over the course...exemplifying the high selectivity of **L-ascorbic acid production** at partial conversion in accordance...keto-L 15 gulonic acid (KLG) to **L-ascorbic** acid (ABA) in a continuous reactor...

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- 7. Microbiological manufacture of L-ascorbic acid**

**Hoshino, Tatsuo / Matzinger, Peter Karl / Ojima, Setsuko / Sugisawa, Teruhide / DSM IP Assets B.V., EUROPEAN PATENT**, Apr 1999

...for the microbiological manufacture of **L-ascorbic** acid from L-gulono-gamma-lactone. As...oxidation of L-gulono-gamma-lactone to **L-ascorbic** acid. Enzymes which catalyze the oxidation of L-gulono-gamma-lactone (I) to **L-ascorbic** acid (II) are known. Nishikimi et al...

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- 8. L-ASCORBIC ACID PRODUCTION IN MICROORGANISMS**

**HUSS, Ronald, John / RUNNING, Jeffrey, A. / SKATRUD, Thomas, J. / BIOTECHNICAL RESOURCES L.P., PATENT COOPERATION TREATY APPLICATION**, Aug 1995  
**L-ASCORBIC ACID PRODUCTION IN MICROORGANISMS** FIELD OF...improvement in microalgal **L- ascorbic acid production**. However, at the relatively...required for cell metabolism and **L-ascorbic acid production**. A need exists for an efficient...

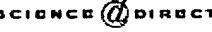
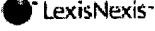
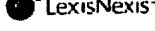
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- 9. L-ASCORBIC ACID PRODUCTION IN MICROORGANISMS**

**HUSS, Ronald, John / RUNNING, Jeffrey, A. / SKATRUD, Thomas, J. / BIOTECHNICAL RESOURCES, PATENT COOPERATION TREATY APPLICATION**, Sep 1993  
**TITLE L-ASCORBIC ACID PRODUCTION IN MICROORGANISMS CROSS-REFERENCES**...provides an improved process for **L- ascorbic acid production**, which process comprises...amounts suitable for growth and **L-ascorbic acid production**, allowing the organism to...

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- 10. Expression of rat gene for l-gulono-γ-lactone oxidase, the key enzyme of l-ascorbic acid**

- [biosynthesis, in guinea pig...](#)  
**Krasnov, A. / Reinisalo, M. / Pitkanen, T.I. / Nishikimi, M. / Molsa, H., *Biochimica et Biophysica Acta (BBA)/General Subjects*, Jul 1998**  
...is the only missing enzyme of L-**ascorbic** acid biosynthesis, homogenates...conditions developed for studies on **L-ascorbic acid production** in rat liver preparations [16...15 min more. An increase of L-**ascorbic** acid content was found in postlysosomal...]  
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- 11. CRYSTAL2-O-ALPHA-D-GLUCOPYRANOSYL-L-ASCORBIC ACID, PRODUCTION AND USE THEREOF**  
**SAKAI SHUZO / YONEYAMA MASARU / MIYAKE TOSHIO / HAYASHIBARA BIOCHEM LAB INC, PATENT ABSTRACTS OF JAPAN**, Jun 1991  
...MATERIAL:Crystal 2-O- $\alpha$ -D-glucopyranosyl-L-**ascorbic** acid. Main diffraction angles ( $\theta$ ) are...cosmetic. PREPARATION: A solution containing L-**ascorbic** acid and an  $\alpha$ -glucosyl saccharide compound...solution containing 2-O- $\alpha$ -D-glucopyranosyl-L-**ascorbic** acid, which is purified by chromatography...  
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- 12. ASCORBIC ACID PRODUCTION FROM YEASTS**  
**PORRO, Danilo / SAUER, Michael / BIOPOLLO S.C.A.R.L., PATENT COOPERATION TREATY APPLICATION**, Feb 2002  
ASCORBIC ACID PRODUCTION FROM YEASTS BACKGROUND...the field of ascorbic acid production. More particularly...for the production of L-**ascorbic** acid from yeast, including...Description of Related Art L-**ascorbic** acid (Vitamin C) is...  
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- 13. METHOD FOR PURIFYING L-ASCORBIC ACID**  
**MAKINO KAORU / KAWAI KAZUHIRO / TANIMURA MASAYASU / TAMURA MASAO / TAKEDA CHEM IND LTD, PATENT ABSTRACTS OF JAPAN**, Jul 1996  
...L-**ascorbic** acid containing 0.01-50W/V% L-**ascorbic** acid, 0-10W/V% 2 keto-L-gulonic acid, 3W...mother liquid for the crystallization of L-**ascorbic** acid in the process of a L-**ascorbic acid production**, and separating and purifying it effectively...  
**Full text available at patent office. For more in-depth searching go to**   
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- 14. L-GALACTOSE DEHYDROGENASE FROM ARABIDOPSIS THALIANA, AND USES THEREOF**  
**SMIRNOFF, Nicholas / WHEELER, Glen / ASCORBEX LIMITED, PATENT COOPERATION TREATY APPLICATION**, Oct 2001  
...both plant and animal, either synthesize L-**ascorbic** acid (also referred to herein as "ascorbic...capillaries, and is useful as an antioxidant. L-**ascorbic** acid is a major metabolite of plants...L-galactose L- galactono-1,4- lactone and L-**ascorbic** acid (Wheeler et al., (1998) Nature 393...  
**Full text available at patent office. For more in-depth searching go to**   
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- 15. VITAMIN C PRODUCTION IN MICROORGANISMS AND PLANTS**  
**BERRY, Alan / RUNNING, Jeffrey, A. / SEVERSON, David, K. / BURLINGAME, Richard, P. / DCV, INC., doing business as BIO-TECHNICAL RESOURCES, PATENT COOPERATION TREATY APPLICATION**, Dec 1999  
...invention relates to vitamin C (L-**ascorbic acid**) production using genetically

modified...photosynthesis. Accordingly, ascorbic **acid production** is known in photosynthetic...pathway from L-galactose to L- ascorbic acid in plants. Fig. 2A is...  
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**16. L-ascorbic acid production in microorganisms**

**Skatrud, Thomas J. / Huss, Ronald J. / Bio-Technical Resources, Inc., UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT**, Mar 1991

Improved production of ascorbic acid is obtained employing Chlorella as a microorganism source and growing the culture under a controlled pattern of carbon source supply. Greatly improved ratios of ascorbic acid to total carbon supplied as well as...

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**17. Oxalic acid production and aluminum tolerance in Pseudomonas fluorescens**

**Hamel, R. / Levasseur, R. / Appanna, V.D., Journal of Inorganic Biochemistry**, Aug 1999

...S0162013499001208 S0162-0134(99)00120-8 Oxalic **acid production** and aluminum tolerance in Pseudomonas...the control cells. Although oxalic **acid production** was observed when citrate, Al-citrate...suggest that the increased oxalic **acid production** in response to Al stress is effected...

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**18. GDP-MANNOSE-3',5'-EPIMERASE AND METHODS OF USE THEREOF**

**WOLUCKA, Beata / VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOLOGIE VZW, PATENT COOPERATION TREATY APPLICATION**, Dec 2002

...ascorbic acid (also referred to herein as L-ascorbic acid, L- M or M) is an 5 important...activity and an increase in ascorbic **acid production** in these mutants. However, like PCT...is sufficient to I increase ascorbic **acid production** in the host cell. 20 Yet another embodiment...

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**19. The commercial production of chemicals using pathway engineering**

**Chotani, G. / Dodge, T. / Hsu, A. / Kumar, M. / LaDuka, R. / Trimbur, D. / Weyler, W. / Sanford, K., Biochimica et Biophysica Acta (BBA)/Protein Structure and Molecular Enzymology**, Dec 2000

...point enzymes. Succinic **acid production** was increased by overexpressing...phosphotransferase system (PTS), succinic **acid production** in E. coli was enhanced...fully replaced by lactic **acid production** (1.19 mol lactate per mole...the gene JEN1 [30] . 3.3 I -Ascorbic acid I -Ascorbic acid (vitamin...

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**20. ENHANCED 2-KETO-L-GULONIC ACID PRODUCTION**

**KUMAR, Manoj / VALLE, Fernando / DARTOIS, Veronique, A. / HOCH, James, A. / MICROGENOMICS, INC., PATENT COOPERATION TREATY APPLICATION**, Feb 2002  
ENHANCED 2-KETO-L-GULONIC **ACID PRODUCTION** FIELD OF THE INVENTION The present invention generally relates...that 2-keto-L-gluconic acid (2-KI-G) is readily converted to L-ascorbic acid (vitamin c) by a one-step chemical procedure in the Reichstein...

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RD Hancock, R Viola - Trends Biotechnol, 2002 - ncbi.nlm.nih.gov

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Hancock RD, Viola R. Unit of Plant Biochemistry, Scottish ...

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[Ascorbic Acid Enhances Endothelial Nitric-oxide Synthase Activity by Increasing Intracellular](#)  
 ... - group of 3 »

A Huang, JA Vita, RC Venema, JF Keaney Jr - Journal of Biological Chemistry, 2000 - jbc.org

... 1 Endothelial **production** of NO is crucial in the control of vascular tone (1), arterial ...

Uptake of ascorbic acid was determined using [ 14 C]L-ascorbic acid. ...

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[L-Ascorbic Acid Potentiates Endothelial Nitric Oxide Synthesis via a Chemical Stabilization of](#)  
 ... - group of 5 »

R Heller, A Unbehaun, B Schellenberg, B Mayer, G ... - Journal of Biological Chemistry, 2001 - jbc.org

... may cause a shift in the balance between the **production** of NO ... Me 2 SO), GTP,

2,4-diamino-6-hydroxypyrimidine (DAHP), L-ascorbic acid, lipopolysaccharide (LPS ...

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[... Gluconobacter oxydans and microbial \*\*production\*\* of 2-keto-L-gulonate, a precursor of L-ascorbic acid](#) ... - group of 7 »

Y Saito, Y Ishii, H Hayashi, Y Imao, T Akashi, K ... - Applied and Environmental Microbiology, 1997 - aem.asm.org

... the other hand, the use of microbial processes to produce L-ascorbic acid has recently ...

Furthermore, the **production** yield may be im- proved still more compared ...

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[Pharmacological Concentrations of Ascorbic Acid Are Required for the Beneficial Effect on](#)  
 ... - group of 5 »

DL Sherman, JF Keaney Jr, ES Biegelsen, SJ Duffy, ... - Hypertension, 2000 - hyper.ahajournals.org

... However, even 10 mmol/L ascorbic acid failed to improve EDNO action when endogenous

superoxide anion **production** was enhanced by treating isolated arterial ...

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[L-Ascorbic Acid Inhibits UVA-Induced Lipid Peroxidation and Secretion of IL-1 alpha and IL-6](#)  
 in ... - group of 3 »

B Tebbe, S Wu, CC Geilen, J Eberle, V Kodelja, CE ... - Journal of Investigative Dermatology, 1997 - nature.com

... These findings indicate a major cell-protective effect of L-ascorbic acid on

UVA-induced ... effect of in vitro and in vivo irradiation on the **production** of ETAF ...

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[L-ascorbic acid 2-phosphate stimulates collagen accumulation, cell proliferation, and](#)  
 formation of a ... - group of 2 »

RI Hata, H Senoo - Journal of Cellular Physiology, 1989 - doi.wiley.com

... more remarkable than the addi- tion of L-ascorbic acid. ... collagen synthesis and/or  
 of **production** of underhydroxylated ... of azetidine 2-carboxylic acid ( Ad , 0.5 ...

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**[The use of micro-organisms for L-ascorbic acid production: current status and future perspectives - group of 4 »](#)**

RD Hancock, R Viola - Applied Microbiology and Biotechnology, 2001 - Springer

... MINI-REVIEW RD Hancock · R. Viola The use of micro-organisms for L-ascorbic acid production: current status and future perspectives ...

[Cited by 10 - Web Search - BL Direct](#)

**[... stromal cells cultured in the presence of dexamethasone,-glycerolphosphate, and L-ascorbic acid - group of 4 »](#)**

SJ Peter, CR Liang, DJ Kim, MS Widmer, AG Mikos - J. Cell. Biochem, 1998 - doi.wiley.com

... Dexamethasone, ascorbic acid or L-ascorbic acid-2-phosphate, and -glycerolphosphate ... cell morphology, expression of ALP activity, OC production, and matrix ...

[Cited by 40 - Web Search - BL Direct](#)

**[Heterotrophic production of ascorbic acid by microalgae](#)**

JA Running, RJ Huss, PT Olson - Journal of Applied Phycology, 1994 - Springer

... An aerobic fermentation process has been developed for the production of L-ascorbic acid (vitamin C). After an extensive screening program for microorganisms ...

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